AMEE23 DATA COMMUNICATION NETWORKS

UNIT-1 INTRODUCTION TO DATA COMMUNICATION AND NETWORKING

1.1 Why study data communication? Data Communication, Networks, Protocols and Standards,
1.2 Standards Organizations. Line Configuration, Topology,
1.3 Transmission Modes, Categories of Networks Internet works

UNIT-2 STUDY OF OSI AND TCP/IP PROTOCOL SUIT

2.1 The Model, Functions of the layers, TCP/IP Protocol Suites

UNIT-3 STUDY OF SIGNALS

3.1 Analog and Digital, Periodic and Aperiodic Signals, Analog Signals,
3.2 Time and Frequency Domains ,Composite Signals , Digital Signals

UNIT-4 STUDY OF DIGITAL TRANSMISSION

4.1 Digital to Digital Conversion, Analog to Digital Conversion

UNIT-5 STUDY OF ANALOG TRANSMISSION

5.1 Digital to Analog Conversion, Analog to Analog Conversion

UNIT-6 STUDY OF MULTIPLEXING

6.1 Many to one/one to Many, Frequency division Multiplexing,
6.2 Wage division Multiplexing, Time division Multiplexing, Multiplexing applications

UNIT-7 TYPES OF TRANSMISSION MEDIA

7.1 Guided Media, Unguided Media, Transmission Impairments, Performance
7.2 Wavelength , Shannon Capacity , Media Comparison, PSTN , Switching

UNIT-8 ERROR DETECTION AND CORRECTION

8.1 Types of Errors, Detection, Parity Check, Vertical Redundancy Check Longitudinal Redundancy Check, Cyclic Redundancy Check, Checksum, Error Correction

UNIT-9 STUDY OF DTE-DCE IN BRIEF

9.1 Digital data transmission, DTE-DCE Interface, Modems, 56K Modems, Cable Modems

UNIT-10 INTRODUCTION TO NETWORKS AND DEVICES

10.1 Network classes, Repeaters, Hub, Bridges , Switches, Routers, .
10.2 Gateways Brouters Routing Algorithms, Distance Vector Routing , Link State Routing

Reference Books:

1. Data and Computer Communications by William Stallings
2. Forouzan: Data Communications & Networking, TMH.
3. William Stallings: Data & Computer Communication, Prentice Hall.